UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

LIVING WITH THE CORN BORER
(Western Infested Area)

Anytime, week of March 12

NOT FOR PUBLICATION

(ANNOUNCER: One announcer only is required for this release)

ANNOUNCEMENT: Now comes the weekly 10-minute period which Station ________ and its farmer listeners devote to a discussion of the farming problems raised by the necessity of LIVING WITH THE CORN BORER. Today, a specialist of the U. S. Department of Agriculture, a leader in the federal and state drive against the corn borer, supplies facts about what the borer has done where it got well established, and just how to carry on one of the most important spring control measures--clean plowing.

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In Kent County, Ontario, Canada, John Johnson farms 150 acres of good land. Until two years ago his main source of income was Flint corn which he sold for seed. The 30 acres he usually planted to corn yielded from 500 to 1,000 bushels according to the season. Then came the corn borer invasion. In 1926, Johnson reduced the corn acreage to 19 acres, because of borer damage. He got only 200 bushels from the 19 acres. Last year he cut his corn planting to 10 acres. This year he doesn't intend to grow corn. He replaces the corn with beans, cabbage, and more wheat.

Johnson estimates conservatively that the corn borer has decreased his income $500 per year.

His experience is a pretty good answer to the question sometimes raised--does the corn borer menace the corn crop of the United States? It's a startling answer, true enough. But there is this encouraging footnote to Johnson's story. He believes that a smaller corn acreage for a few years and a permanent clean-up can hold the pest in check. That he's correct is indicated by the fact that the Ontario clean-up in the spring of 1927 reduced corn-borer infestation 50 per cent. The Canadians, along with farmers of the United States, are learning to live with the corn borer and keep it under control.

It seems worth while to try to keep down borer damage when we recall that the fight is made to protect a crop valued annually at about 2 billion dollars; a crop, moreover, on which our great livestock industry depends.

Joe Srigley, another Ontario farmer living in Kent county, has a true story to tell that indicates how the corn borer affects stock raising.

Srigley used to specialize in hogs, selling as much as $1,500 worth of hogs each year. The corn borer has forced him to shift to poultry. Last year he planted four acres of corn. Before the corn borer came to Ontario and started eating the corn he used to feed the hogs, he planted 30 acres. Now he keeps a flock of 750 chickens and a herd of 10 dairy cows to take the place of hogs and corn.

But of course farmers in this region know the mischief done by the corn borer. Right now they are planning the spring operations necessary to bring the borer under control. One of the most important of these operations is clean plowing, and the remainder of this talk will be devoted to answering five questions about plowing that are continually cropping up. The first is:

Does plowing kill the borer?

And the answer is that the mere plowing of infested cornstalks does not of itself kill many borers. Most of the pests crawl up to the surface sooner or later. But notice this: if a clean job of plowing is done, borers coming to the surface can't find any shelter. Exposed to the weather and to the attacks of their natural enemies--birds,ants,ground beetles, and various insect parasites and predators--they soon perish.

On the other hand, if the plowing job isn't cleanly done, the borers reaching the surface lodge in fragments of corn husks, cornstalks, corn leaves, stubble, and weeds that may be there and remain snugly housed until they emerge as moths to lay the eggs from which the 1928 army of borers will come.

Now you naturally want to know just what is a clean job of plowing for borer control.

It is plowing which leaves no plant material of any kind on the surface. Not only that, all fragments which might shelter borers must be buried so thoroughly that none will be dragged to the surface later in disking and cultivating. To insure this result, plowing to a depth of 6 inches is recommended; also surface cultivation after plowing to close all large cracks and crevices. But if it isn't possible to plow to a depth of 6 inches, a clean job still can be done by skilful plowmen. The depth isn't important, so long as all fragments are covered to stay covered.

Poor or ordinary plowing does not control the corn borer, and in a good many ways is worse than no attempt to cover litter because it is difficult to clean up a poorly plowed field by other methods.

Now, I can hear you asking, "How is a clean job of plowing done?"

As I've just said, the skill of the plowman is just as important as the size or type of plow used. Careful, painstaking work to see that all surface refuse is turned under is the first essential. As to the kind of plow: a

14-inch bottom plow equipped with attachments for covering trash gives good results when properly adjusted.

Many farmers have found that fastening three No. 9 galvanized or wrought iron wires to the plow helps cover the trash securely. These wires are about 10 feet long and trail behind the plow. The loose ends are caught by the furrow slice as it turns over. The weight of the soil on the buried ends holds the wire taut, and the wires hold the trash and stalks to the bottom of the furrow slice.

New, especially-designed 16-inch and 18-inch plows well adapted for clean plowing have recently been placed on the market. They do good work in fields of standing corn stalks. Field tests with these plows showed that with the aid of a rolling coulter of proper size and of the wires just described they completely turn under all standing corn stalks and all trash.

And now, finally, what is the best time to plow for borer control?

Experiments have shown that in the middle west the time of plowing is not important as far as destruction of the corn borer is concerned. If the stalks are plowed under during the late summer or early fall, or in the spring, most of the borers leave the stalks and crawl to the soil surface looking for shelter there soon after plowing. If the stalks are plowed under in the late fall most of the borers remain inactive in the stalks all through the winter and come to the surface in the spring after the soil warms up in April or May.

The important thing is not the time of plowing, but the certainty that there is no debris left on the surface to shelter the corn borer.

Just a brief summary of the important things to remember about spring plowing to control the corn borer:

First, if plowing is to be effective all trash must be turned completely under so that material may not by later cultivation be dragged to the surface before time for the moths to emerge.

Second, clean plowing controls borers by depriving them of shelter when they crawl to the surface.

Third, average plowing methods must be improved sufficiently to insure that all cornstalks and trash are turned completely under.

Fourth, neither depth of plowing nor time of plowing is important for borer control if a clean job is done and material is not afterward dragged to the soil surface.

Fifth, and last, for a more extended discussion of corn borer control methods, secure Farmers' Bulletin No. 1-5-4-8, issued by the United States

department of agriculture.

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ANNOUNCEMENT: And that concludes the second of nine weekly broadcasts for which Station __________ has arranged with the U. S. Department of Agriculture in order to aid in the campaign against that menacing crop pest, the European corn borer. Listeners wishing the bulletin just mentioned, may send requests to this station. For the benefit of those who may have missed the number of the bulletin, it is Farmers' Bulletin 1-5-4-8.

UNITED STATES DEPARTMENT OF AGRICULTURE

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LIVING WITH THE CORN BORER
(Western Infested Areas)

Anytime, week of April 16

NOT FOR PUBLICATION

ANNOUNCEMENT: Now comes the weekly discussion of ways and means of LIVING WITH THE CORN BORER and growing corn in spite of it. Today we give a rest to the investigators who figure out permanent interruptions to the private life of the borer. A couple of the thousands of dirt farmers who carry out the scientists' plans to make life uncertain for the insect will tell how they did a good job of it last year. The first is Bert J. Dorsey, a successful New York corn grower.

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"When orders came to clean up last spring I plowed my stubble under deep--at least nine inches," Mr. Dorsey starts his story.

"Then I used a disk on the fields, which tended to drive the stubble down still further into the earth. I went easy on dragging the former corn lots so as not to unearth any of the buried stalks. A homely contrivance consisting of a dry-goods box attached to the drag by a piece of chain cut down the work of picking up stalk fragments after dragging. As I and my men dragged the fields we reached down, picked up every piece of stubble and stalk the drag had pulled up, and threw all of them into the box.

"After rolling the field, we combed it again for loose trash, but found little. In harvesting I took care to cut the stalks about two inches above the ground. As soon as the crop had been taken off the field I turned the cows loose in it. You'd be surprised what a lot of hungry cows can do to a stubble field, even if the stubble is cut right next to the ground.

"Last year there were borers in my fields. This year I haven't been able to find any. I'm going to duplicate the control methods of last year again this spring. Their success is encouraging," Mr. Dorsay declares.

Now let's put on the stand another man direct from the corn borer firin line.

He's Adolph Heyman of Quincy, Mich., who had to tackle adverse conditions for clean-up last year. But Mr. Heyman did the job-- and believes it was work well spent.

Mr. Heyman had a 99-acre farm of heavy, rich, black-loam soil, with 26 acres in standing cornstalks to clean up. First he used a gang plow, but the weather was wet, and the soil stuck to the moldboards. Then he tried a 16-inch walking plow of another make, It also failed to do the work. The first of May was only a few days away, and it began to look as if Mr. Heyman

couldn't get the clean-up done in time to comply with the Michigan regulations.

Then the weather turned for the better, and the soil dried out somewhat. For the third time, Mr. Heyman went into that field--and the third time proved to be the proverbial "charm." He turned out a splendid job of plowing, completely covering the stalks, and along with them the borers.

Now to turn from the experiences of Mr. Dorsey and Mr. Heyman, and take a look at the State regulations that they took such pains to comply with. In the Great Lakes area the States of Michigan, Ohio, Indiana, Pen- Pennsylvania, and New York by law require a clean-up of the previous year's corn fields, and in New England, Massachusetts has clean-up regulations applying to all plants which harbor the corn borer.

In Michigan every county infested with the corn borer is under clean-up regulations. The area includes the counties of Monroe, Wayne, Lenawee, Macomb, Oakland, Livingston, St. Clair, Lapeer, Genesee, Sanilac, Tuscola, Huron, Hillsdale, Branch, Jackson, Calhoun, Ingham, and Shiawassee, and certain townships in the counties of St. Joseph, Saginaw, Kalamazoo, and Bay.

To meet the Michigan regulations, farmers must destroy all corn crop parts and all coarse-stemmed weeds within cornfields in one of two ways. The first and preferred method is burning before May 1 of the year following growth of the corn. The second is "regular or special" field procedure prior to May 1. This "field procedure" must be such as to insure that between May 1 and July 10 no portion of corn plant shall appear on the surface of the ground. The only exemptions to this regulation are ear corn stored for grain, fast corn stubble, not more than 2 inches in height above the soil surface in clean corn fields; ensilage, corn finely shredded or ground, completely plowed under, burned, or trampled into and deeply covered by manure.

Michigan also is conducting educational work in all the infested areas, with special attention to areas bordering upon clean territory. The authorities are using plowing demonstrations and contests, meetings, tours to badly infested areas, plowing contests, exhibits, low-cutting demonstrations, and newspaper articles to spread information about the menace of the corn borer and the methods of control.

Ohio regulatory measures cover areas under three sets of conditions.

One set exists throughout the counties of Fulton, Lucas, Wood, Ottawa, Sandusky, Seneca, Erie, Huron, Cuyahoga, Lake, and Geauga, and in designated townships of Lorain and Ashtabula counties. Here the dead-line is May 1. By that date the regulations require burning or destroying by other means, all corn crop parts or remnants with exemptions of clean fields where the stubble is fast and not more than 2 inches in height, stored ear corn, or corn made into ensilage, shredded, plowed under, or trampled into and covered with manure.

The second set of conditions is found in Williams, Defiance, Paulding, and Henry counties where the exemptions from clean-up include all those in the first area and these others: stubble 4 inches in height when sown to small grain, corn cobs, or pieces of cobs wherever found.

The third set of conditions is present in the counties of Van Wort, Putnam, Allen, Hancock, Hardin, Wyandot, Marion, Crawford, Morrow, Richland, Ashland, Knox, Medina, Wayne, Holmes, Summit, Portage, Stark, Tuscarawas, Carroll, Harrison, Trumbull, Mahoning, Columbiana, and Jefferson, and in certain townships of Lorain and Ashtabula counties. There the exemption includes corn stubble 6 inches in height when sown to small grains, as well as all the classes in the first and second areas.

These State regulations have been found necessary because control of the corn borer depends on community-wide effort. The corn growers must help one another. Corn borer moths fly from field to field. Therefore, in order to keep control, all fields and other possible harboring places of the borer must be swept clean of corn and other refuse which will shelter the caterpillars now stirring into activity after the winter's hibernation. Kill these caterpillars and no moths will fly in June to lay the eggs from which will come the 1928 borer army.

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ANNOUNCEMENT: As soon as the Spring control operations have been completed forehanded growers will begin planning harvest, storage, and feeding of the 1928 corn crop in the best way for borer control. The recommended methods are given in Farmers' Bulletin No. 1548. Listener requests for this bulletin may be transmitted through Station ________.